UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,698	02/03/2006	Saied Abedi	FUJL 22.278(10079-4-01010)	3895

26304 7590 12/16/2009

KATTEN MUCHIN ROSENMAN LLP
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER	
VU, MICHAEL T	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
12/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,698	ABEDI, SAIED	
	Examiner	Art Unit	
	MICHAEL T. VU	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31 and 33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31 and 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 06/25/2009 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Arguments

2. Applicant's arguments with respect to claims 1-31 and 33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun (US 2002/0012385) in view of Tsutsumi (US 2002/0072372).**

Regarding claim 1, Yun teaches a method of selecting an active base station during soft handover (the mobile station selected a base station in a handoff situation and received a better quality data service, [0005]), the active base station receiving data

from a source apparatus for onward transmission to a destination apparatus (base station received quality data service in a handoff situation, [0057]), the method comprising:

obtaining relative service quality with respect to said destination apparatus based on service quality of data transmission from a base station to said destination apparatus (mobile station received a data service, e.g., both a data service and a voice service from a base station, [0055-0057]) and service quality of data transmission from said base station to another destination apparatus (mobile station received a data service included the quality of both a data service and a voice service from a base station, [0055-0057]);

transmitting said relative service quality from said base station to said source apparatus (mobile station received a data service included the quality of both a data service and a voice service from a base station, [0055-0057]); and

But Yun does not clearly teach selecting the active base station by said source apparatus based on the relative service quality received from said base station.

However, Tsutsumi teaches selecting the active base station by said source apparatus based on the relative service quality received from said base station (see handover service based on measuring its received quality; and making, for each service area, [0013, 0016-0017, 0020]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yun, with Tsutsumi's teaching, in order to provide to secure radio channel capacity for controlling the mobile station when making

handover the decisions based on the quality of service without the need to transmit extra information for saving overhead cost, etc..

Regarding claim 5, Yun and Tsutsumi teach the method according to claim 1, wherein a plurality of different measures of quality of service from the base station to the destination apparatus are determined (measured reception strength, [0006-0007]) of Yun.

Regarding claim 6, Yun and Tsutsumi teach the method according to claim 1, wherein **at least one of** the following measures of quality of service is determined: (a) throughput ratio (b) ratio of satisfied packets (c) base station buffer occupancy (quality of data service, [0010-0011]) of Yun.

5. **Claims 2-4, 7-31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun (US 2002/0012385) in view of Tsutsumi (US 2002/0072372), and further in view of Subramanian (US 6,987,738).**

Regarding claim 2, Yun and Tsutsumi teach the method according to claim 1, further comprising **but Yun and Tsutsumi does not clearly teach** determining a credit value based on the relative service quality, and transmitting the credit value from the base station to the source apparatus.

However, Subramanian teaches determining a credit value based on the relative service quality, and transmitting the credit value from the base station to the source

apparatus (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yun and Tsutsumi, with Subramanian's system, in order to provide the radio resource allocation in a wireless communication system for improving the system throughput e.g., throughput, delay, signal loss, or quality of service for producing more efficiency of the resources allocation.

Regarding claim 3, the combination of Yun, Tsutsumi and Subramanian teach the method according to claim 2, wherein the source apparatus receives the credit value from the base station and selects the active base station based on the credit value (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 4, the combination of Yun, Tsutsumi and Subramanian the method according to claim 3, wherein the credit value is determined for each of a plurality of source apparatuses (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 7, Yun, and Tsutsumi teache the method according to claim 1, **but Yun and Tsutsumi does not clearly teach** wherein a credit value is determined for each of a plurality of source apparatuses by comparing measures of a quality of service from the base station to a plurality of destination apparatuses.

However, Subramanian teaches wherein a credit value is determined for each of a plurality of source apparatuses by comparing measures of a quality of service from the base station to a plurality of destination apparatuses (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yun and Tsutsumi, with Subramanian's system, in order to provide the radio resource allocation in a wireless communication system for improving the system throughput e.g., throughput, delay, signal loss, or quality of service for producing more efficiency of the resources allocation.

Regarding claim 8, the combination of Yun, Tsutsumi and Subramanian the method according to claim 7, wherein the credit value is based on **at least one of** the following relative measures: (a) distance from average throughput (b) distance from minimum throughput ratio distance from minimum quality of service (d) distance from minimum buffer length (average effective data rate, Col. 5, lines 63-67), and (Col. 6, line 62 to Col. 7, line 40) of Subramanian.

Regarding claim 9, the combination of Yun, Tsutsumi and Subramanian the method according to claim 7, wherein the credit value is based on a plurality of relative measures, and is a single value obtained by combining the relative measures (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 10, the combination of Yun, Tsutsumi and Subramanian the

method according to claim 1 wherein the source apparatus receives credit values from the base station, and selects the active base station based on a history of the credit values (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 11, the combination of Yun, Tsutsumi and Subramanian the method according to claim 10, wherein a source user equipment with an improving history of credit values from a base station selects that base station as the active base station (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 12, the combination of Yun, Tsutsumi and Subramanian the method according to claim 11, wherein a source user equipment with a worsening history of credit values from a base station deselects that base station as the active base station (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 13, the combination of Yun, Tsutsumi and Subramanian the method according to claim 1, wherein a base station is selected as the active base station based additionally on a measure of radio channel conditions from the source apparatus to the base station (determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 14, the combination of Yun, Tsutsumi and Subramanian the

method according to claim 13, wherein a base station is selected as the active base station based on a history of radio channel conditions (selected active base station, [0006-0007, 0010]) of Yun.

Regarding claim 15, the combination of Yun, Tsutsumi and Subramanian teach the method according to claim 1, further comprising transmitting an indication of a selected base station from the source apparatus to the base station (measured and indication from base station, [0052]) of Yun.

Regarding claim 16, the combination of Yun, Tsutsumi and Subramanian the method according to claim 1, further comprising scheduling uplink transmissions in dependence on the relative service quality (QoS, Col. 1, lines 11-39) of Subramanian.

Regarding claim 17, the combination of Yun, Tsutsumi and Subramanian the method according to claim 16, wherein the source apparatus receives a credit value based on the relative service quality and determines a time and/or rate of packet transmission based on the credit value (determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 18, the combination of Yun, Tsutsumi and Subramanian the method according to claim 1, the method being repeated periodically (configured based on periodically when handover as part of service in the situation of handover, [0012-0013]) of Tsutsumi.

Regarding claim 19, the combination of Yun, Tsutsumi and Subramanian the method according to claim 1, wherein the base station transmits data to the destination

apparatus in its downlink (handover between a mobile device and a base station, [0009-0010]) of Yun.

Regarding claim 20, the combination of Yun, Tsutsumi and Subramanian the method according to claim 1, wherein the base station transmits data to the destination apparatus via a network (handover is inherently included transmitted via different networks, [0009-0010]) of Yun.

Regarding claims 21, 26 and 33, Yun teaches a base station for receiving data packets in an uplink from a source apparatus for onward transmission to a destination apparatus (a mobile station selected a base station for soft handoff, 0009-0010]), the base station (base station, [0009]), comprising:

a unit which obtains relative service quality with respect to said destination apparatus based on service quality of data transmission from said base station to said destination apparatus (the mobile station selected a base station in a handoff situation and received a better quality data service, [0005, 0010]) and service quality of data transmission from said base station to another destination apparatus (the mobile station selected a base station in a handoff situation and received a better quality data service, [0005, 0010]);

But Yun does not clearly teach a producing unit which produces a credit value based on the relative service quality; a transmitting unit which transmits the credit value to the source user equipment apparatus;

However, Subramanian teaches a producing unit which produces a credit value based on the relative service quality; a transmitting unit which transmits the credit value to the source user equipment apparatus (Figure #5, determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yun and Tsutsumi, with Subramanian's system, in order to provide the radio resource allocation in a wireless communication system for improving the system throughput e.g., throughput, delay, signal loss, or quality of service for producing more efficiency of the resources allocation.

But Yun and Subramanian do not clearly teach a receiving unit which receives from the source apparatus an indication of whether the base station has been selected as an active base station; and an allocating unit which allocates a channel to the source apparatus if the base station has been selected as an active base station.

However, Tsutsumi teaches a receiving unit which receives from the source apparatus an indication of whether the base station has been selected as an active base station (selected active base station, e.g., diversity handover, [0012-0013]); and an allocating unit which allocates a channel to the source apparatus if the base station has been selected as an active base station (configured channel based on a candidate of a service area, e.g., handoff, [0016-0017, 0019-0021]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yun and Subramanian, with Tsutsumi's system, in order to provide to secure radio channel capacity for controlling the mobile station

when making handover the decisions based on the quality of service without the need to transmit extra information for saving overhead cost, etc..

Regarding claim 22, Yun, Subramanian and Tsutsumi teach the base station according to claim 21, wherein the credit value is determined for each of a plurality of source apparatuses (determined/computed/measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Regarding claim 23, Yun, Subramanian and Tsutsumi teach the base station according to claim 21, wherein the credit value is based on a plurality of different measures of quality of service from the base station to a destination apparatus (Figure #5, determined/computed/measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57) of Subramanian.

Regarding claim 24, Yun, Subramanian and Tsutsumi teach the base station according to claim 21, wherein the credit value is determined for each of a plurality of source apparatuses by comparing measures of a quality of service from the base station to a plurality of destination apparatuses (Figure #5, determined/computed/measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57) of Subramanian.

Regarding claim 25, Yun, Subramanian and Tsutsumi teach the base station according to claim 21, wherein the credit value is based on a plurality of relative measures, and is a single value obtained by combining the relative measures (Figure #5, determined/computed/measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57) of Subramanian.

Regarding claim 27, Yun, Subramanian and Tsutsumi teach the user apparatus according to claim 26, further comprising a storing unit which stores a history of credit values (determined/computed the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57), and wherein the selecting unit is arranged to select the active base station based on the history of credit values (determined/computed/measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57) all of Subramanian.

Regarding claim 28, Yun, Subramanian and Tsutsumi teach the user apparatus according to claim 26, further comprising a determining unit which determines a measure of radio channel conditions from the user apparatus to the base station (determined/computed/measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57), and wherein the selecting unit is arranged to select the active base station based additionally on the measure of radio channel conditions (determined/computed/measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57) all of Subramanian.

Regarding claim 29, Yun, Subramanian and Tsutsumi teach the user apparatus according to claim 26, further comprising a storing unit which stores a history of radio channel conditions (Figure #5, determined/computed/ measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57), and wherein the selecting unit is arranged to select the active base station based on the history of radio channel conditions (determined/computed/ measured the credit value based on schedule algorithm, or quality of service, Col. 9, lines 27-57) all of Subramanian.

Regarding claim 30, Yun, Subramanian and Tsutsumi teach the user apparatus according to claim 26, further comprising a transmitting unit which transmits an indication of a selected base station (measured and indication from the base station, [0052]) of Yun.

Regarding claim 31, Yun, Subramanian and Tsutsumi teach the user apparatus according to claim 26, further comprising a scheduling unit which schedules uplink transmissions in dependence on the credit value (Figure #5, determined/computed/ measured the credit value based on schedule algorithm, Col. 9, lines 27-57) of Subramanian.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. VU whose telephone number is (571)272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL T VU/
Examiner, Art Unit 2617

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617